

RECEIVED

AUG 19 1996

FCC MAIL ROOM

Before the
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20544

DOCKET FILE COPY ORIGINAL

In the Matter of)

)

Amendment of the Commission's Rules to) ET Docket No. 96-102

Provide for Unlicensed NII/SUPeRNet) RM-8648

Operations in the 5 GHz Frequency Range) RM-8653

To: The Commission

**REPLY COMMENTS OF SEMINOLE COUNTY, FLORIDA, A
CHARTER COUNTY, TO APPLE COMPUTER, INC.'S,
COMMENTS OF JULY 15, 1996, REGARDING THE COMMISSION'S
NOTICE OF PROPOSED RULE MAKING (NPRM) OF APRIL 25, 1996,
PROVIDING FOR THE AVAILABILITY OF 350 MHZ IN THE
5 GHZ FREQUENCY RANGE FOR USE BY UNLICENSED EQUIPMENT,
TO BE CALLED "NII/SUPERNET DEVICES"**

Dick Van der Weide,
Chairman of the Seminole County Commission
County Commission Offices
1101 East First Street
Sanford, Florida 32771
(407) 321-1130 ext. 7207

Ron H. Rabun,
Seminole County Manager
County Manager's Office
1101 East First Street
Sanford, Florida 32771
(407) 321-1130 ext. 7211

Chris Grasso,
Manager, Telecommunications Division
County Operations Center
200 West County Home Road
Sanford, Florida 32773

No. of Copies rec'd
List A B C D E

0+5

(407) 323-2500 ext. 5114

COUNSEL:

Robert A. McMillan,
County Attorney, by
Harlan Wright,
Assistant County Attorney
County Attorney's Office
1101 East First Street
Sanford, Florida 32771
(407) 3231-1130 ext. 7254

August 13, 1996

SUMMARY OF THE REPLY COMMENTS

1. Seminole County, Florida, consists of a mixture of very affluent and modest neighborhoods and exhibits a similar range in density of development. Already the site of pilot programs and projects by major telecommunication providers, Seminole County and its neighborhoods are experiencing a wide range of provider interest and service offerings which are usually correlated with socio-economic variables and density of settlement.
2. The County¹ welcomes the Commission's proposal for making available 350 Mhz of spectrum in the 5 GHz band for use by unlicensed equipment which the Commission has named "NII/SUPERNet" devices. The County also welcomes the Commission's intention to assign the devices an unlicensed status and to provide for initial flexibility in technical standards.
3. The County, however, urges the Commission to permit the proposed wireless networks linking the devices to approximate the power and range which Apple Computer, Inc., proposed in its initial petition in 1995. The County believes that interference and other risks can be controlled for by means other than reducing the proposed networks to the range of LANS. To restrict the new networks' range

¹When capitalized, "County" refers to the Seminole County government. When "county" is uncapitalized, or the full name "Seminole County" is used, the term refers to the territorial jurisdiction.

to such an extent would frustrate the Commission's own goals for the program, as well as their utility for communities.

4. Wireless networks in the 5 GHz spectrum with sufficient range to function as bona fide community networks would not threaten mainstream commercial services due to the inherent attributes of such networks and unmet needs they would fulfill. Such community networks would also work to reduce concern about overconcentration of telecommunication power.

5. In Seminole County, true community networks and NII/SUPERNet devices would insure that more, if not most, residents would be able to take advantage of electronic and telecommunication resources being developed by local government and other public and civic institutions. The County, itself, has a relatively well-developed telecommunications infrastructure. The problem of the "last link-up", particularly to residences whose income, service preferences or geographic location make them unattractive to commercial providers would be solved by wireless community networks. More convenient and more efficient local institutions, including "virtual (branch) offices could be one benefit of a "telecounty".

6. The combination of community networks with the County's own telecommunications infrastructure would increase the dissemination of critical knowledge, skills and aptitudes among the local work force to increase its competitiveness in the new global labor market.

**REPLY COMMENTS TO APPLE COMPUTER, INC.'s, COMMENTS ON
THE COMMISSION'S NPRM FOR NII/SUPERNET DEVICES
FOR USE IN THE 5 GHZ FREQUENCY RANGE**

Background Information

Seminole County, lying directly north of Orlando and Orange County, Florida, is participating in this discussion for three basic reasons. First, Seminole County is already being heavily impacted by the telecommunications revolution. Seminole County is the site for Time Warner's Full Service Network pilot program. The County has been petitioned by BellSouth to grant that company a

cable television franchise. Some parts of the county are also served by wireless cable television. Moreover, telephone service by entities other than the local exchange company including PCS services lies less than one year in the future for Seminole County.

The County has also decided to comment upon the NII/SUPERNet proposal, because the county's socio-economic and demographic profiles are varied and require a flexible telecommunication policy. Much of Seminole County consists of affluent suburban communities of relatively high population density which are inhabited by business executives and managers and by professional and technical employees. Indeed, some studies rank the county as being the most affluent in Florida. Nevertheless, Seminole County is not without pockets of less affluent and less educated populations. These communities not only reflect problems related to Florida's agrarian past, but also those associated with the lower level service sector. Many of these latter groups of residents live in clusters in otherwise low density areas of the county.

Last, the County wishes to comment upon the Commission's NPRM, and in particular Apple Computer's response to it, due to the trends being exhibited by the initial plans and pilot programs of the large private telecommunications providers operating in the county. These plans and programs focus upon the more affluent areas of the county and emphasize entertainment and teleshopping to a large extent. A more complete coverage of the county's population and a fuller realization of the potential of the telecommunications revolution is desirable.

Comments

Areas of Agreement by the County with the Commission and with Apple Computer

The County perceives the Commission's NPRM as a compromise between the two original proposals for wireless networks by Apple Computer and WINForum made in 1995. The County applauds the Commission's proposal for making available 350 MHz of spectrum in the 5 GHz band for use by a new category of equipment which the Commission has named "NII/Supernet devices". This proposed dedication of spectrum is more generous than Apple Computer's original proposal. The County also supports the Commission's intention of avoiding overly complex technical standards, as well as the Commission's intention to assign the new devices an unlicensed status in order to reduce the cost and to facilitate their availability to citizens.

The County, however, endorses Apple Computer's position stated in its comments of July 15, 1996, in response to the Commission's NPRM, regarding the power and range of the proposed wireless networks for use by NII/SUPERNET devices. These networks' power and range need to be greater than those of LANs. For the Commission's own goals of facilitating wireless access to the NII and of offering new opportunities for advanced telecommunications services serving public needs, the range of the proposed 5 GHz wireless networks should be similar to those associated with WANS. The County does recognize, however, that the range for the proposed networks of seventeen to twenty-five miles desired by Apple Computer may not always be feasible where network overload would be a problem due to density of use or some other condition.

Like Apple Computer, the County believes that concerns that a one watt network would lead to interference with existing, licensed uses may be met by the use of narrow beam directional antennas for point to point transmissions by the proposed networks. Also like Apple Computer, the County believes that the new service should operate under a new Part 16 set of regulations. Such recognition of the new service as a separate "radio service" would encourage more reliable operations and encourage the development of an emerging industry. These trends would promote the Commission's own core goal of foster the development of a new devices and services. They would also go far in avoiding the repetition of a CB-radio-like "tragedy of the commons" which is of concern to the Commission. Then too, future users of NII/SUPERNET devices and wireless networks are far less likely to treat the new technology as a toy, unlike CB-radios, given increasing public awareness of the critical and growing role telecommunications skills and capacities play in individual and community economic success.

*Community Networks: Not a Threat to Commercial Systems,
But a Potential Deterrent Against Their Abuse*

A greater range for the proposed wireless community networks does not mean that they and the new NII/Supernet devices would threaten demand for commercial telecommunications services. First, the proposed network architecture and the nature of the bandwidth to be used are significantly limited as to the quality, capacity, maximum speeds and security of transmissions. These attributes would make community network services unattractive for mainstream business, commercial and even some local governmental uses. Moreover, as subsequent paragraphs illustrate, wireless community networking uses will frequently center upon services and market segments which will not be especially attractive to

commercial providers. The County believes, as does Apple Computer, that if a user of a NII/SUPERNET device and a community wireless network desires access to broader telecommunications infrastructure such as the Internet and its successors, that user should expect to pay for commercial access.

One threat the building of wireless community networks with reasonable range and transmission capacity would help prevent is that of an "Information/Communications Trust", to use a term from an earlier age of economic overconcentration that is once again becoming relevant. The existence of wireless community networks would, at least to some extent, dilute overconcentrated control over the NII. Community networks would partially separate ownership of the information superhighway's conduit from that of information distribution systems, of information carriage and of content.

*Specific Benefits of Wireless Networks:
The Case of Seminole County*

Assuming that the proposed wireless design has sufficient range, the NII/Supernet devices would greatly facilitate the creation of true community/neighborhood interactive, multimedia networks among citizens. These community network webs, in turn, could link up to the institutional networks and/or LANS of public institutions such as local governments, school systems or civic institutions. Such a development would greatly assist, i.e., the County in insuring that all its residents had access electronically, not only to the offices of local public decision-makers, but also to data bases and services such as GIS and remote forms completion. Widespread community networks could lead to significant governmental and other institutional cost savings and efficiencies by permitting the creation of "virtual(branch) offices".

County government already has a fairly extensive wirelined WAN and a wireless network of growing sophistication.² It is in the process of developing online information and services. The challenge for the County, and potentially for other community institutions, has been to insure that all residents/clients can utilize the electronic information and services being made possible by the telecommunications revolution. Wireless community networks would provide that last link to residences and business for non-commercial services.

²The County is in the midst of completing its public safety/PCS migration to a digital system in the 6 GHz band.

Most importantly, wireless networks of sufficient range, in conjunction with relatively inexpensive multimedia devices, would permit the general inclusion of less advantaged and more isolated residents of Seminole County in the telecommunications revolution. Such inclusion would mean effective universal service. Such true universal service would be a means to promote familiarity with telecommunications applications and devices, new knowledge and improved skills on the part of such residents. Interaction with computer networks, i.a., promotes abstract and systemic thinking, as well as the capacity for continuous learning, which economists and business commentators including Robert Reich, Lester Thurow and Bill Gates have identified as crucial attributes for continuing individual success in the new global labor market.

The combination of the County's institutional network with community wireless networks, in conjunction with commercial networks and content providers, would work to promote Seminole County's economic growth and development at the macro level as well. New "high tech" business is more likely to settle or to start-up in areas which have a well-developed balanced local information infrastructure and residents proficient in its utilization.

Submitted on behalf of Seminole County, the 13th Day of August, 1996:

Dick Van der Weide,
Chairman of the Seminole County Commission
County Commission Offices
1101 East First Street
Sanford, Florida 32771
(407) 321-1130 ext. 7207

Ron H. Rabun,
Seminole County Manager
County Manager's Office
1101 East First Street
Sanford, Florida 32771
(407) 321-1130 ext. 7211

Chris Grasso,
Manager, Telecommunications Division
County Operations Center
200 West County Home Road
Sanford, Florida 32773

(407) 323-2500 ext. 5114

COUNSEL:

Robert A. McMillan,
County Attorney, by
Harlan Wright,
Assistant County Attorney
County Attorney's Office
1101 East First Street
Sanford, Florida 32771
(407) 3231-1130 ext. 7254

August 13, 1996